In the Specification:

Please **replace** the paragraph at **page 1, lines 5 to 17,** with a replacement paragraph amended as follows:

From the US Patent US 6,122,965 A, or from the corresponding German Patent DE 196 49 715 C2, an arrangement for measuring accelerations is known, which consists of four single or independent individual sensors arranged in a rectangle on a common substrate and respectively having a main sensitivity axis. Each individual sensor comprises a paddle with a center of gravity as [[a]] an inertial or seismic mass. The main sensitivity axes of the respective individual sensors respectively comprise an error angle or displacement angle relative to the normal of the substrate surface. The direction of each rectangle side and the associated main sensitivity axis respectively span a plane, and the planes of the individual sensors lying on a diagonal are tilted or angled toward one another.

Please **delete** the previously amended paragraph at **page 3, lines 1 to 3.**

Please **delete** the new paragraph that was previously added (according to the amendment of July 28, 2005) at **page 3, above line 4**, having the following beginning and ending text:

~~This object is further achieved according to the invention~~

~~. . . .~~

~~extends vertically to the substrate.~~

Please **add** two new paragraphs at **page 3, above line 4**, as follows:

The above object has been achieved according to the invention in an acceleration sensor arrangement comprising: a frame; plural inertial masses; and a respective set of two torsion spring elements respectively suspending each respective one of the inertial masses from the frame, whereby the two torsion spring elements of each respective set are aligned with one another on a respective reference plane parallel to a surface of the respective inertial mass when the respective inertial mass is at rest without being deflected, so that the two torsion spring elements form a respective torsional pivot axis about which the respective inertial mass is pivotable. Each respective inertial mass is respectively suspended asymmetrically by the respective set of two torsion spring elements associated therewith, so that a respective center of gravity of the respective inertial mass is offset by a first offset distance from the reference plane and is offset by a second offset distance from a respective second plane that extends

perpendicular to the reference plane along the respective torsional pivot axis of the respective inertial mass. The respective inertial mass is configured and arranged, and an offset angle is defined so that the trigonometric tangent function of the offset angle is given by the first offset distance divided by the second offset distance, and the offset angle is greater than 20 degrees.

The above object has further been achieved according to the invention in an acceleration sensor arrangement comprising: a frame; plural inertial masses; and a respective set of two torsion spring elements respectively suspending each respective one of the inertial masses from the frame, whereby the two torsion spring elements of each respective set are aligned with one another to form a respective torsional pivot axis about which the respective inertial mass is pivotable. Each respective one of the inertial masses is respectively suspended asymmetrically by the respective set of two torsion spring elements associated therewith, so that a respective center of gravity of the respective inertial mass is offset from the respective torsional pivot axis of the respective inertial mass in two orthogonal directions. The frame includes an outer frame bounding an outer perimeter of the acceleration sensor arrangement and an inner divider frame that divides an inner space of the outer frame into plural cells in which the inertial masses are respectively received. Each respective set of two torsion spring elements includes an

outer torsion spring element connecting the respective inertial mass to the outer frame and an inner torsion spring element connecting the respective inertial mass to the inner divider frame.

Please **replace** the paragraph at **page 3, lines 19 to 21,** with a replacement paragraph amended as follows:

> Fig. 2. a sectional illustration through the arrangement according to Fig. 1 with two individual sensors and their <u>inertial or</u> seismic masses,

Please **replace** the paragraph at **page 4, lines 7 to 17,** with a replacement paragraph amended as follows:

> The Fig. 1 shows an acceleration sensor 1 for tri-axial measurement of accelerations, consisting of four identical individual sensors 2a, 2b, 2c and 2d. Each individual sensor 2a-d comprises [[a]] <u>an inertial or</u> seismic mass 3a, 3b, 3c or 3d with a center of gravity S_a, S_b, S_c and S_d, whereby each seismic mass 3a-d is suspended eccentrically relative to its center of gravity S_a, S_b, S_c and S_d on two torsion spring elements 4a, 4b, 4c, 4d, 4e, 4f, 4g or 4h in a rotatably movable manner. Each torsion spring element 4a-h is on its part in turn connected with an outer frame 5 <u>or an intermediate frame 6</u>. The outer frame 5 holds together the four individual sensors 2a-d and is divided by an intermediate frame 6<u>, whereby each individual inertial</u>

mass is respectively supported from the outer frame by one torsion spring element and from the intermediate frame by another torsion spring element.

Please **replace** the paragraph at **page 5, lines 3 to 12,** with a replacement paragraph amended as follows:

In Fig. 2, the acceleration sensor 1 of the Fig. 1 is illustrated in the section A-A. A disk that consists of silicon and that is structured in a known micromechanical manner is arranged as a common substrate 8 of the four individual sensors 2a-d between a lower cover disk 7 and an upper cover disk 9, and is connected with these, for example by wafer bonding, whereby the lower cover disk 7 and the upper cover disk 9 similarly consist of silicon. By means of an etching process, the inertial or seismic masses [[2a-d]] 3a-d of the individual sensors [[3a-d,]] 2a-d, the torsion spring elements 4a-h and the intermediate frame 6 are structured or patterned into the disk 8. Gaps are provided between the cover disks 7 and 9 and the inertial masses 3a-d to allow the inertial masses to move.

[RESPONSE CONTINUES ON NEXT PAGE]